

ABSTRACT OF THE INVENTION

a A communication system. ^{including} ~~One embodiment includes~~ at least two functional blocks, wherein an first functional block communicates with a
5 second functional block by establishing a connection, wherein a connection is a logical state in which data may pass between the first functional block and the second functional block. One embodiment includes a bus coupled to each of the functional blocks and configured to carry a plurality of signals. The plurality of signals includes a connection identifier that indicates a particular
10 connection that a data transfer is part of, and a thread identifier that indicates a transaction stream that the data transfer is part of.